

REMARKS

The Applicants filed an Amendment by facsimile on June 22, 2006 in response to an Office Action from the Examiner mailed on March 22, 2006. In the Amendment, the Applicants unintentionally failed to address the current status and rejections of claims 43-55 of the Application. In response to the Amendment, a Notice of Non-Compliant Amendment was mailed on June 30, 2006. The present Amendment remedies the failure of the Amendment filed on June 22, 2006 to address the current status and rejections of claims 43-55. More specifically, the present Amendment addresses the current status and rejections of claims 43-55. No other changes to the Amendment have been made, and the Amendment is otherwise identical to the Amendment filed on June 22, 2006.

After entry of the present Amendment, claims 1, 3-45, and 47-55 remain in the application with claims 1, 23, 33, and 43 in independent form. Claims 1 and 43 have been amended to more specifically identify the particular base as the base was originally claimed in independent claims 23 and 33; thus, no new matter has been added. Claims 3-7, 13, and 18 have been amended in view of the amendment of claim 1, and claim 3 has also been amended for dependency. Claims 23 and 33 have been amended to maintain consistency with the form of independent claim 1 by eliminating the word "solution". Claims 24 and 25 have been amended in view of the amendment to claim 23. Claims 34 and 35 have been amended in view of the amendment to claim 33. Claims 47-51 have been amended in view of the amendment to claim 43, and claims 47 and 48 have also been amended for dependency. Claim 52 has been amended for dependency. Claims 2 and 46 have been cancelled. Claims 8-12, 14-17, 19-22, 26-32, 36-42, 44, 45, and 53-55 remain unchanged.

Rejections Under 35 U.S.C. § 102(b) in View of Mohiuddin

Claims 1, 4, 5, and 9-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Mohiuddin (United States Patent No. 4,282,285). The Applicants respectfully assert that, in view of the amendments to claim 1, this rejection is overcome. Specifically, the Examiner correctly recognized that Mohiuddin fails to disclose, teach, or suggest an alkali metal hydroxide, as indicated in the Examiner's rejections of claim 23 and 33 under 35 U.S.C. § 103(a). Claim 1 has been amended to more specifically claim the base as an alkali metal hydroxide, as claimed in original claims 23 and 33, in order to overcome the 35 U.S.C. § 102(b) rejection over Mohiuddin.

Rejections Under 35 U.S.C. § 103(a) Over Mohiuddin in View of Ramatowski

Claims 2, 3, 6, 7, and 43-55 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mohiuddin in view of Ramatowski (United States Patent No. 5,256,355). In view of the amendment to claims 1 and 43, which have been amended to more narrowly claim the base, this rejection would also apply to amended claims 1 and 43 since the Examiner has used Ramatowski to supplement Mohiuddin as to one of the specific bases that is claimed in claims 3 and 47 and that is covered by amended claims 1 and 43. In addition, claims 23-42 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mohiuddin in view of Ramatowski, albeit in combination with another reference.

The Applicants assert that the Examiner has not established the requisite *prima facie* case of obviousness. Further, the Applicants respectfully assert that Ramatowski is not analogous art to the present invention and therefore cannot be properly used to reject the present claims under 35 U.S.C. § 103. Therefore, the Applicants traverse this rejection.

Independent claim 1, as amended, focuses on a method of making a molded article that includes a paint layer and a polyurethane layer. The method comprises the steps of applying a paint composition to a surface of a mold to form the paint layer, infusing the paint layer with an alkali metal hydroxide, and adhering the polyurethane layer to the paint layer. Independent claim 23 has similar scope to claim 1 but more specifically defines the paint layer as comprising a water-based latex composition and specifies that the alkali metal hydroxide is sprayed onto the paint layer. Independent claim 33 has similar scope to both claims 1 and 23, but specifies that the alkali metal hydroxide is mixed into the paint composition in addition to defining the paint layer as comprising the water-based latex composition. Independent claim 43 has similar scope to claim 1 but specifies that the paint layer is provided and that the polyurethane layer is applied and adhered to the paint layer.

A Prima Facie Case of Obviousness Has Not Been Established

As the Examiner is aware, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference must teach or suggest all the claim limitations. See *MPEP 2142 and 2143*. Notably, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant's disclosure.¹ This last principle is commonly referred to as impermissible hindsight. *MPEP 2142* mandates that "...impermissible hindsight must

¹ *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991).

be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”

Relative to the combination of Mohiuddin with Ramatowski, the Applicants respectfully assert that the Examiner has failed to satisfy the first criterion, i.e., a suggestion or motivation to combine the teachings of Mohiuddin with Ramatowski, required to appropriately establish the *prima facie* case of obviousness. More specifically, the Applicants respectfully assert that the Examiner has engaged in impermissible hindsight in finding a motivation to combine Mohiuddin with Ramatowski.

The cases of *In re Sang Su Lee*² and *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*³ clarify the law and the Examiner’s responsibilities relative to the first criterion. In short, *In re Sang Su Lee* emphasizes that an Examiner must show “some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead [an] individual to combine the relevant teachings of the references.” *In re Sang Su Lee* at 1343.

The more applicable and more recent case, *Princeton*, is discussed in greater detail immediately below. In June of 2005, the Court of Appeal for the Federal Circuit (CAFC) reiterated the principles involved in assessing the differences between the prior art and the claimed invention when addressing the first criterion...in the subject application, the motivation to combine Mohiuddin and Ramatowski. See *Princeton*. In *Princeton*, citing *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004), the CAFC emphasized that a rejection under 35 U.S.C. § 103 specifically requires consideration of the claimed

² 277 F.3d 1338 (Fed. Cir. 2002).

invention “as a whole.” Relating to this “as a whole” issue, the CAFC went further to emphasize that

[i]nventions typically are new combinations of existing principles or features. *Env'tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983) (noting that “virtually all [inventions] are combinations of old elements”). The “as a whole” instruction in title 35 prevents evaluation of the invention part by part. *Ruiz*, 357 F.3d at 1275. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component. *Id.* This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. Further, this improper method would discount the value of combining various existing features or principles in a new way to achieve a new result – often the essence of the invention. *Id.*

Contrary to this reasoning, section 103 requires assessment of the invention as a whole. *Id.* This “as a whole” assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the invention and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner. *Id.* In other words, section 103 requires some suggestion or motivation, before the invention itself, to make the new combination. (emphasis added).

Motivation to Combine Mohiuddin and Ramatowski

In relation to the elements claimed in amended independent claims 1, 23, 33, and 43, the Examiner relies on Mohiuddin for teaching a method of making a molded article that includes infusing a paint layer with a base to adhere the paint layer to a polyurethane layer. The Examiner correctly recognizes that Mohiuddin does not at all disclose, teach, or suggest potassium hydroxide as the base and, more broadly, any alkali metal hydroxide as the base. To supplement the deficiencies of the disclosure and teachings of Mohiuddin, the Examiner

³ 411 F.3d 1332 (Fed. Cir. 2005).

then relies, in error, on the teachings of Ramatowski. Simply stated, there is no suggestion or motivation to combine Mohiuddin with Ramatowski as the Examiner has done.

The Examiner provides no rationale whatsoever as to what would motivate one of skill in the art to supplement the deficiencies of Mohiuddin with the disclosure of Ramatowski, except for the overly conclusive statement that Ramatowski discloses that the base is potassium hydroxide and that, therefore, it would be obvious to one of skill in the art at the time of the invention to use the teachings of Ramatowski in Mohiuddin's method of molding in order to hydrolyze ester groups and thereby substitute hydroxyl groups. This is simply not the case.

An artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the invention, i.e., insufficient adhesion between a paint layer and a polyurethane layer, and with no knowledge of the claimed invention, would **not** have selected the potassium hydroxide from Ramatowski for use in the method of Mohiuddin because Mohiuddin and Ramatowski pertain to completely different endeavors. As set forth above, Ramatowski primarily deals with surface treating a cable jacket **that is already cured** in order to seal splices in the cable. One of skill in the art, when faced with the problem of adhering a paint layer to a polyurethane layer in a molded article **while making the molded article** would not have looked to Ramatowski in order to remedy the deficiencies of Mohiuddin.

Further, Mohiuddin discloses a series of polyurethane catalysts for the purpose of providing active sites in the paint layer which act to bond the paint layer to the polyurethane layer. Conversely, Ramatowski discloses treating the surface of a cable jacket in order to

hydrolyze ester groups, which then must be reacted with a primer before a polyurethane layer can be adhered to the cable jacket. Again, one of skill in the art, when faced with the problem of adhering a paint layer to a polyurethane layer in a molded article **while making the molded article** would not have looked to Ramatowski in order to remedy the deficiencies of Mohiuddin since Ramatowski discloses a completely different mechanism for adhering layers than Mohiuddin.

The finding by the Examiner of a motivation to combine Mohiuddin and Ramatowski is the result of breaking apart the invention, as claimed in amended claims 1, 23, 33, and 43, and employing pure hindsight to find the component parts of the claims which, as reiterated by the Court of Appeals for the Federal Circuit in *Princeton*, is impermissible as a basis for finding a motivation to combine references.⁴

For the Examiner to reach a proper determination under 35 U.S.C. § 103:

The examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Ramatowski is Not Analogous Art to the Present Invention

⁴ The courts have also indicated that it is impermissible to use the inventor's disclosure as a road map for *selecting* and combining prior art disclosures.

For purposes of evaluating the obviousness of claimed subject matter, one must make certain that a particular reference relied upon constitutes "analogous art." *In re Clay*, 966 F.2d 656, 658-59, 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992). In determining whether a reference is analogous prior art, the Federal Circuit espoused a two-prong test inquiring:

(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and

(2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

In re Clay, 966 F.2d at 658-59, 23 U.S.P.Q.2d at 1060-61.

As to the first prong, Ramatowski is surely not from the same field of endeavor as the present invention. More specifically, the present invention relates to a method of making a *molded article* and a method of increasing adhesion between the layers of the *molded article*. Ramatowski pertains to a method of bonding a polyurethane composition to a cable jacket of a cable. As suggested in column 1, lines 41-49, Ramatowski is primarily focused on the art of repairing cables in the field and providing a protective coating over a splice. As such, the endeavor of Ramatowski is completely different from the endeavor of adhering layers in a molded article.

As to the second prong, Ramatowski is also **not** reasonably pertinent to the particular problem with which the present invention is involved. The mere fact that Ramatowski

discloses an article including a “polyurethane” does not mean that Ramatowski is analogous art to molded articles including a polyurethane layer. Although, on its face, Ramatowski endeavors to address a similar problem with which the present invention involves, it is clear upon closer examination that Ramatowski addresses adhesion between two layers at a different stage than the present invention, and further aims to improve adhesion through a different mechanism than the present invention. More specifically, Ramatowski involves treating the surface of a cable jacket with potassium hydroxide in order to **hydrolyze ester groups** in the cable jacket, **after which a primer is applied to the jacket**, followed by adhering a polyurethane composition to the primed cable jacket. In other words, **the cable jacket in Ramatowski is cured**, and the surface of the cable jacket is merely treated in order to allow the cable to be repaired. Conversely, the present invention involves infusing a paint layer with an alkaline metal hydroxide. As set forth in paragraph [0008] of the present application, the alkaline metal hydroxide catalyzes a reaction between an isocyanate component in the polyurethane layer and the paint component to increase the adhesion between the paint layer and the polyurethane layer, **which is different from the function of potassium hydroxide in Ramatowski of hydrolyzing ester groups on a surface of a cured layer.**

Further, in order to infuse the paint layer, the paint layer is uncured when the alkaline metal hydroxide is infused therein. As such, infusing occurs during actual formation of the molded article and **not** during repair of a pre-formed article. Therefore, Ramatowski is surely not reasonably pertinent to the particular problem with which the present invention is involved, which is to adhere a paint layer and a polyurethane layer during formation of a molded article.

Since Ramatowski is neither from the same field of endeavor of the present invention, nor reasonably pertinent to the particular problem with which the present invention addresses, Ramatowski cannot provide a basis for a rejection of the present claims under 35 U.S.C. §103.

In view of the foregoing, the Examiner's further rejections of the dependent claims are moot since those rejections also rely on the combination of Mohiuddin and Ramatowski. Further, the rejections that are based on the combination of Mohiuddin and Ramatowski and further in view of "National Park Service Envirofacts" are also moot since there is no motivation to combine Mohiuddin and Ramatowski and "National Park Service Envirofacts" is insufficient to remedy the deficiencies of either Mohiuddin or Ramatowski.

In summary, Ramatowski is not analogous art to the present invention and, even if it were, the Examiner's rationale for combining Mohiuddin and Ramatowski is insufficient and therefore inappropriate. There are no legitimate suggestions, teachings, or motivations within the cited references for combining the cited references. As such, the Examiner cannot establish a *prima facie* case of obviousness relative to independent claims 1, 23, 33, and 43 of the present application.

In view of the amendments to claims 1, 23, 33, and 43, as well as the remarks set forth above, it is respectfully submitted that the § 102(b) rejection has been overcome and that the § 103(a) rejections of amended independent claims 1, 23, 33, and 43 are improper and must be withdrawn. Thus, claims 1, 23, 33, and 43 are in condition for allowance. Furthermore, the remaining claims depend either directly or indirectly from the novel and non-obvious features of these independent claims such that these claims are also allowable.

This application is now presented in condition for allowance and such allowance is respectfully solicited. The Commissioner is authorized to charge our deposit account no. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,
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Date: July 19, 2006

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